

CLAIMS

I claim:

1. A transmission system comprising:

a random bit generator that is configured to provide an unpredictable sequence of bits,
a transmitter that is configured to communicate the unpredictable sequence of bits, and
a storage device that is configured to store data corresponding to the unpredictable
sequence of bits, to facilitate a verification of receipt of the unpredictable sequence of bits by a
receiving system.

2. The transmission system of claim 1, wherein

the transmitter includes at least one of:

a radio-frequency transmitter,
an infrared transmitter, and
a sonic transmitter.

3. The transmission system of claim 1, wherein

the unpredictable sequence of bits is communicated via at least one of:

frequency modulation,
on-off keying of a carrier signal,
return-to-zero encoding, and
a synchronizing pilot signal.

4. A receiving system comprising

a receiver that is configured to receive a modulation corresponding to a random bit sequence only,

a detector that is configured to detect the random bit sequence from the modulation, and

5 a storage device that is configured to store data corresponding to the random bit sequence, to facilitate a verification of receipt of the random bit sequence.

5. The receiving system of claim 4, wherein

the receiver includes at least one of:

10 a radio-frequency receiver,

an infrared receiver, and

a sonic receiver.

6. The receiving system of claim 4, wherein

15 the modulation includes at least one of:

frequency modulation,

on-off keying of a carrier signal,

return-to-zero encoding, and

20 a synchronizing pilot signal.

7. The receiving system of claim 4, further including

a mixer that is configured to combine the random bit sequence with an identifier of the receiving system to form the data corresponding to the random bit sequence.

25 8. The receiving system of claim 7, wherein

the mixer is configured to combine the random bit sequence with the identifier of the receiving system using an irreversible transform.

9. The receiving system of claim 4, wherein

30 the modulation is at a relatively low frequency relative to a carrier frequency of a transmitted signal that is received by the receiver.

10. A carrier signal that is configured to contain
a modulation corresponding to an unpredictable sequence of bits.

11. The carrier signal of claim 10, wherein

5 the carrier includes at least one of:
a radio-frequency signal,
an infrared signal, and
a sonic signal.

10 12. The carrier signal of claim 10, wherein

the modulation includes at least one of:
frequency modulation,
on-off keying of a carrier signal,
return-to-zero encoding, and
15 a synchronizing pilot signal.

13. The carrier signal of claim 10, wherein

the unpredictable sequence of bits occur at a low-frequency relative to the carrier signal.

14. A verification system comprising:

a first register that is configured to contain received data,

a second register that is configured to contain at least a portion of transmitted data,

a comparator, operably coupled to the first register and the second register, that is

5 configured to compare the received data to a select portion of the transmitted data, and

a shift controller that is configured to shift the portion of transmitted data in the second register to provide a next select portion of the transmitted data for comparison, if the comparator indicates a difference between the received data and the select portion of the transmitted data.

10 15. The verification system of claim 14, further including

a reward system that is configured to provide a reward based on a length of the received data when the comparator indicates a match between the received data and the portion of the transmitted data.

15 16. The verification system of claim 14, further including

a mixer, operably coupled to the second register and the comparator, that is configured to combine at least a part of the portion of the transmitted data with an identifier of a receiver to produce the select portion of the transmitted data that is compared to the received data.

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17. A method of providing a reward for being at a particular locale, comprising:

transmitting an unpredictable sequence of bits from a transmitter at the particular locale,
storing transmission data corresponding to the unpredictable sequence of bits,
receiving at least a portion of the unpredictable sequence of bits at a receiver when the

5 receiving system is within receiving range of the transmitter,

storing reception data corresponding to the portion of the unpredictable sequence of bits
at the receiving system,

subsequently comparing the reception data to the transmission data to identify a period of
correspondence between the reception data and the transmission data, and

10 determining the reward based on the period of correspondence.

18. The method of claim 17, wherein

comparing the reception data to the transmission data includes:

partitioning the reception data into a plurality of subsets of reception data, and

15 comparing each subset of the plurality of subsets of reception data to a
corresponding subset of the transmission data.